



PRENATAL ULTRASOUND FINDINGS

Ventriculomegaly

A second trimester ultrasound measures many parts of a developing baby, including the fluid-filled spaces in the brain. These spaces are called ventricles. There are two ventricles near the center of the brain called the **lateral ventricles**. These usually measure less than 10 mm (about ½ inch) each.

What is ventriculomegaly?

Ventriculomegaly means that one or both of the baby's lateral ventricles are larger than usual. About 1 in every 500 babies has mild or moderate ventriculomegaly. Severe ventriculomegaly is rare.

- **Mild:** Ventricles measure 10 to 12 mm
- **Moderate:** Ventricles measure 13 to 15 mm
- **Severe:** Ventricles measure more than 15 mm (also called hydrocephalus or “water on the brain”)

What causes ventriculomegaly?

Many things can cause ventriculomegaly. It is often just part of normal development. Some babies have ventricles that are naturally large. Less often, ventriculomegaly can be due to changes in the flow of brain fluid or a difference in the way the brain is formed. Most of the time, an exact cause of ventriculomegaly cannot be found.

Does ventriculomegaly go away?

The ventricle size usually stays the same or gets smaller. Sometimes the ventricles will return to a normal size later in pregnancy. In about 1 out of 10 babies the ventricles get bigger. This may increase the chance for a problem.

What does it mean for my baby?

Most babies are born healthy when ventriculomegaly is the only ultrasound finding. However, the chance for problems depends on the ventricle size and whether there are other ultrasound findings.

The type of problems can include:

- **Birth defects:** Birth defects of the heart, kidney, and spine are found more often in babies with ventriculomegaly. Finding any birth defect adds concern for a chromosome condition or genetic syndrome.
- **Chromosome conditions:** About 3% to 10% of babies with ventriculomegaly have a chromosome condition, such as Down syndrome. The chance is higher when there are other ultrasound findings. The chance may be lower if you had a normal prenatal screening test.
- **Infections:** Cytomegalovirus (CMV) and toxoplasmosis are two infections known to cause ventriculomegaly. Infections can affect a baby even with no signs of illness in the pregnant person.
- **Genetic syndromes:** Many genetic syndromes cause large ventricles. Most of these conditions are very rare and difficult to diagnose before a baby is born.
- **Brain problems:** Large ventricles can be due to a problem with how the brain is forming. This may also affect how the brain works. There is a higher chance for learning problems, ranging from minor delays to severe intellectual disabilities. Problems with brain development are more likely when the ventricles measure more than 12 mm.

Will I be offered more testing?

Yes. Tests are offered to help find the reason for ventriculomegaly. It's your choice to decide whether or not to have more testing. The type of testing depends on your medical history, your family history, and your ultrasound findings. You may be offered some or all of the following tests:

- **Ultrasound:** A level 2 ultrasound is done to check for other ultrasound findings. Ultrasound is able to find some birth defects, but not all birth defects can be seen during pregnancy. You may also be offered ultrasounds later in pregnancy to monitor the baby's health.
- **Amniocentesis:** Amniocentesis is done by using a thin needle to remove a small amount of the fluid around the baby. The fluid is tested for chromosome conditions, prenatal infections, and other conditions, as needed. There is a very small chance for miscarriage with this test.
- **Fetal MRI:** Magnetic resonance imaging (MRI) is another way to look at the baby's brain before birth. It does not use radiation and is considered safe in pregnancy.

What if all the tests are reassuring?

Babies with ventriculomegaly and normal test results are usually born healthy. However, there are many different reasons for ventriculomegaly. Normal results do not guarantee that the baby has no health problems or birth defects. It is not possible to test for all conditions or causes of intellectual disability.

Where can I get more information?

Your genetic counselor or medical geneticist can answer additional questions you may have about this ultrasound finding.

Kaiser Genetics Departments:

Fresno/Modesto	(559) 324-5330
Oakland	(510) 752-6298
Sacramento	(916) 614-4075
San Francisco	(415) 833-2998
San Jose	(408) 972-3300

References:

UpToDate: Fetal cerebral ventriculomegaly (2021)

Society for Maternal-Fetal Medicine (SMFM): Mild fetal ventriculomegaly: diagnosis, evaluation, and management (2018)